

## Heidegger and the Automatic Earth Image

In his Spiegel interview of September 23rd 1966 Heidegger spoke of being 'shocked' when he 'just now saw the photographs of the earth taken from the moon' *Ich bin jedenfalls erschrocken, als ich jetzt die Aufnahmen vom Mond zur Erde sah.* (Heidegger 1976, 206) This statement came after the long and cautious account of his actions under National Socialism that makes up the first part of the interview and the controversial sentence from *Introduction to Metaphysics* concerning the 'inner truth and greatness of this movement' '*innere Wahrheit und grosse dieser Bewegung* - namely 'the encounter between planetary determined technics and the modern human' '*der Begegnung der planetarisch bestimmten Technik und des neuzeitlichen Menschen* - (Heidegger 1976, 204). But was the shock provoked by the Earth image enough to upset the frame and routines of Heidegger's thinking or did it serve merely to confirm and illustrate them?

From the interview it seems that the citation of the planetary image served only to confirm Heidegger's already established views that philosophy had been succeeded by cybernetics in the epoch of planetary technicity. He immediately situates it within a cluster of thoughts already intimated in the 1949 Bremen lectures and the writings of the 1950s: 'We do not need atomic bombs, the uprooting of man is already here. We only have pure technical relations. It is no longer an Earth on which humans live today.' '*Wir brauchen gar kein Atombombe, die Entwurzelung des Menschen ist schon da. Wir haben nur noch rein technische verhältnisse. Das ist keine Erde mehr, auf der der Mensch heute lebt.*' (Heidegger 1976, 206). But did Heidegger see clearly? Is there a 'planetary technics,' a 'pure technical relation or does the picture call for other ways of thinking with technics? Must viewing the planet from without necessarily eclipse the Earth and uproot its inhabitants?

It is important at the outset to be clear about the precise images that so shocked Heidegger. In his history of the imaging of the earth *Earthrise: How Man First Saw the Earth* (2008) Robert Poole describes the narrow range of whole earth imagery

available in 1966. It is necessary to attend carefully to this history in order to understand what was happening to the earth picture at the moment Heidegger encountered it, almost literally, on the eve of his *Spiegel* interview. For the black and white extra-planetary images available in late summer 1966 were very different to the chromatic icons later generated by the manned Apollo missions. The automatic Earth images from 1966 were generically distinct from the *human* photographic images of the planet earth taken by astronauts from 1968 using Hasselblad cameras, albeit without viewfinders. The now iconic series of earth-images from Apollo 8 ('Earthrise' 1968) to Apollo 17 ('Blue Marble' 1972) was initiated more two years after Heidegger's interview. While these became the prevailing images of Earth as a human world - 'our' fragile planet - they were not the ones that Heidegger found shocking in 1966.

The description given by Heidegger of the planetary images as seen 'just now' and taken of the Earth from the Moon allows them to be precisely identified. They are the two Earth images taken by the unmanned, robotic 'Lunar Orbiter 1' nicely described by Poole as 'an ingenious orbiting photographic laboratory' (Poole, 72). The Lunar Orbiter missions were dedicated to securing map quality images of the lunar surface ahead of manned moon landings by the Apollo programme. Lunar Orbiter 1 was launched on August 10th 1966 and successfully made and transmitted 413 images between the 18th and 29th of August. The first of the photographs referred to by Heidegger was taken at 16:35 GMT on August 23rd 1966 followed by a second less striking photograph two days later. The image was published in a NASA Press Release on September 14th 1966, less than two weeks before the *Spiegel* interview.

The accounts of 'Philosophy after the Apollo Missions' elaborated in Kelly Oliver's *Earth and World* (2015) and Benjamin Lazier's article 'Earthrise; or, the globalisation of the World Picture' (2011) implicitly privilege the humanly mediated Apollo 8 mission image of the planet 'rising' 'above' the Moon. They do however note the uncanny quality of the non-human planetary images that preceded them, especially those produced by NASA's Lunar Orbiter 1 mission seen by Heidegger.

Although both writers are aware that the planetary photographs available to Heidegger in 1966 are robotic, automatically captured and processed images, the power of the imagery subsequently produced by the Apollo missions diverts them from a closer examination of Heidegger's shock when confronted by the automatic planetary image. The terms of Heidegger's description suggests he was shocked by the image's 'technical' automatic character with its suggestion of an absence of human decision and control in their capture. However, the robotic Lunar Orbiter photographs of the Earth were themselves aesthetically humanised by rotating the planetary images 90 degrees clockwise thus making the Earth appear as if it was rising up from a horizontally oriented moon surface rather than moving from left to right of a vertically oriented moon surface bathed in the light of the sun. A similar operation was performed on the Apollo 'Earthrise' images. producing humanly comprehensible substitutions of an Earth for a Sun 'rise' rather than, in the case of Lunar Orbiter and Apollo 8, an Earth displacement with respect to automatic camera, moon and an absent shared light source in the sun.

While Kelly and Lazier locate Heidegger's image in the Lunar Orbiter One mission they underestimate its significance as an *automatic* image. Yet it was automatic in a way that scarcely conformed to Heidegger's view of technics or to his understanding of the encounter between modern humans and planetary technics. It was from the outset a *problematic* image emerging from a context of improvised contingency rather than the 'pure technical relation' imagined by Heidegger. NASA released it (NASA 66-H-1146) in portrait format (fig. 1) respecting its technical vertical orientation and even adding a note 'The Earth is shown on the left of the photo with the U.S, east coast on the upper left ... the surface of the moon is shown on the right side of the photo' (cited in Price, 76). However the image was disseminated in landscape format after rotating the image in order to make it appear as if the earth was rising above the surface of the moon (fig.2). When re-issuing the photograph a year later NASA explicitly stipulated the vertical orientation of the image adding that this would be the view of the Earth awaiting the astronauts as they orbit the Moon and 'face the earth'. Its lateral orientation - Moon to the right, Earth to the left - clearly deflates any hierarchy between the two cosmic

objects sharing the light of an absent third. Its subsequent however rotation restores the privileged place of the Earth in the scenario placing it in an analogous position to sun as seen from Earth. The latter was the picture that the Apollo 8 astronauts were *expecting* to see and had been trained to capture with their blinded cameras. Yet this operation on the image making it into an 'Earthrise' was almost entirely fictional for, as Price notes, the Lunar Orbiter image was taken retrospectively as the robot disappeared behind the moon making the image an 'Earthset' rather than 'Earthrise' (Price 77). The automatic images posed problems from the outset for human viewers, forcing them to adapt the automatic planetary image to fit human purposes and aspirations.

The efforts to re-orient an automatic technical image are repeated at a philosophical level in Oliver and Lazier's texts. Oliver cites the image in its horizontal 'Earthrise' format, (Oliver, 34) making it consistent with her focus on philosophy *after* the Apollo missions: She visually aligns the Lunar Orbiter image that in her translation 'frightened' Heidegger (Oliver 152) with Apollo 8's 'Earthrise'. Lazier by contrast assumes Heidegger saw the vertical portrait images, reproducing the portrait format and commenting 'it is easy to see how the photos he did have at his disposal (from Lunar Orbiter 1) might have been frightening in the extreme. They are stark and austere. They are also vertiginous in a way that the iconic "Earthrise" is not. They confound one of the presuppositions of phenomenological analysis, that the body has a customary orientation in space: up and down, front and back, above and below, before and behind.' (Lazier 610). While Oliver re-orientates the image into a precursor of 'Earthrise' Lazier stresses the challenge it poses to human orientation in thinking, with Earth and Moon *alongside* each other.

In a sense both Lazier and Oliver are correct. It is most likely that Heidegger saw the press versions of the image already converted into a horizontal proto-Earthrise format and so not the 'vertiginous' vertical portrait version cited by Lazier. This renders problematic Lazier's argumentative step from the disorienting vertical image to a discussion of Husserl's pre-Copernican character of everyday experience: the adapted 'Earthrise' version is wholly consistent - has been *made*

wholly consistent -with such a pre-Copernican experience. But Oliver's citation of the Earthrise image runs the risk of allowing it, and Heidegger's testimony in the Spiegel interview, to be too quickly aligned with an Arendtian sense of world alienation or estrangement (Oliver 152-3) and to miss a chance critically to reflect on the understanding of technics informing Heidegger's shock at the automatic planetary image.

Both Oliver and Lazier underestimate, even ignore, the technical character of the image itself, preferring to cite it as a symbol for larger processes such as Oliver's claim that for Heidegger 'global technology' is 'symbolized by images of the Earth from the moon' (Oliver 152). Yet perhaps the nexus between the image, atomic warfare, cybernetics, 'global technology' and National Socialism evoked in the interview needs to be examined more closely, beginning with the image itself. How far does the image conform to Heidegger's understanding of planetary technics, and might it not point to a quite different understanding of the human encounter with technics. At this point, Lazier's perceptive comment regarding the 'stark and austere' character of the black and white images may prove a stronger point of departure for understanding Heidegger's shock at the images than the question of the orientation of the Earth with the respect to the moon. For the starkness and austerity of the images point less to the omnipotence of technics in uprooting humans from the Earth than to the limits of an analogue technology and a largely improvised human/technical interface or 'encounter'.

On November 13th 2008 NASA released a 'recovered' version of image 66-H-1146 claiming that in 1966 'the technology did not exist to produce a full-resolution image'. (fig.3) As part of the 'Lunar Orbiter Image Recovery Project' technicians at the NASA Ames Research Centre converted the 'data stored on magnetic tapes into a digital format using a combination of modern digital imaging technology and restored 1960s-era machinery'

(<https://earthobservatory.nasa.gov/images/35906/earthrise-1966>, last accessed 3/7/2020). The digitally *true* image was thus recovered or re-mastered from the analogue distortions of the 'original' by a fresh translation between analogue and

digital technologies. In the process the re-mastered Lunar Orbiter image approximated even more to the humanised aesthetic parameters of the Apollo images losing precisely the starkness and austerity noted by Lazier. What seems to have happened in the process is that the automatic, analogue signature of the image is smoothed out in the digital translation and made less obtrusive. The stark black and white contrasts of the original images were transformed into delicate tonal transitions producing a range of continuous differentiations of black and white analogous to the chromatic values of digital colour photography. If we can understand better what has been filtered out in the process of digitally translating the image into a format and finish familiar to viewers of the Apollo images, we might understand better what it was that shocked Heidegger. The change in the effect of the sunlight between the analogue and digital versions show how the stark and austere qualities described by Lazier served to confirm the seamless and uncanny functioning of planetary technics for Heidegger in 1966

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To do this it is necessary to understand more fully the technical processes of automated image capture at work in the Lunar Orbiter series and how these processes marked the images they produced. The Lunar Orbiter was essentially an automated image capture, processing and transmission unit designed for close-range photography of the lunar surface. It was the technical response to the problem of capturing sufficiently high quality images of the lunar surface to coordinate future manned landings on the moon with the technical limitation of not being able to return exposed negatives for processing on Earth. The largely improvised technical solution to this problem involved a complex and fragile sequence of automated operations whose vulnerable improvised character left room for a degree of flexibility and openness to contingency. It was this vulnerability, the *impurity* of the technical relation, that enabled the capture of Earth images that were neither planned nor included in the mission programme. The images, in other words, were made possible by the frailty of an improvised and creaking technical sequence rather than by any pure technical a priori.

Although the process of image capture logically begins with the exposure of a film, in the case of the Lunar Orbiter this was technically a late stage in a series of technical operations characterised by a low degree of feedback that stitched together various technical processes. Since the moment of exposure was determined by the temporal process of development, scanning, transmission and printing that succeeded it, the process once initiated would proceed with only a small degree of flexibility. The process 'began' with the exposure of a 70mm film that moved through the camera without interruption at fixed intervals of time. The exposed film then moved through a dry development process - pioneered by military satellites on the secret Corona programme - in which the film was brought into contact with sticky developer and then heated. This produced a photograph similar to a polaroid that was then sent for scanning by an electron beam and the quarter of a million lines individually transmitted via radio signals captured by tracking stations in California and Madrid. The signals were translated to video tape, projected and then filmed with a movie camera. The negatives were processed by Eastman Kodak in New York, cut into contact strips which were then printed as individual photographs.

The leakage of information at all stages of this extremely heterogenous process accounts for the stark visual character of the image that shocked Heidegger. It testifies not so much to planetary technical domination as to its fragile, imperfect working and exposure to contingency. The image emerged from a technical process that was far from the seamless *Gestell* that Heidegger imagined and feared; instead it was the outcome of an improvised hook-up of various technologies - optical, chemical, mechanical and electro-magnetic. The transitions between the diverse technologies constituted weak links in the technical sequence that at any moment risked its collapse - whether in the mechanical movement of the film from exposure to chemical development back to mechanical printing and then on to electro-magnetic scanning, transmission and reception - but also provided openings for responding to chance opportunities provided by such a loosely articulated sequence.

It is also important to recall that the mission of Lunar Orbiter 1 was determined not only by technical but also by political and economic constraints. The already heterogeneous technical sequence was over-determined by equally fragile translations between organisational and economic processes adapted to conflicting sites, interests and sources of feedback and interference. This was far from the blackbox characterisations of the political relied upon by Heidegger in his global views of the the USA, USSR and National Socialist Germany. Beyond its well-known origins in the Cold War and its constant political struggles for funding, NASA itself was not a single black box but contained competing organisational, even cultural interests operating across a spectrum ranging from the conservative operational control administration at Langley, Virginia to the 'hippies' in the experimental Jet Propulsion Laboratory (JPL) in California that had hosted among others James Lovelock who proposed the cybernetic Gaia hypothesis. In addition, NASA worked with contractors, in this case Boeing, with both parties legally tied to contractual and incentive arrangements that provided the economic framework for the mission and the context of its technical sequences.

NASA's planning of the Lunar Orbiter mission was strictly governed by the mission objective of securing high quality images of the lunar surface for a future moon landing. The flight plan did not include taking photographic images of the Earth or even the possibility for doing so. Photographing Earth from a distance was not a declared objective of a mission dedicated to close-range photography of the moon. Price shows in his history that while there was interest among some NASA personnel in pursuing an Earth image, inspired in part by Stewart Brand's whole Earth campaign and his button badges from Spring 1966 asking 'Why haven't we seen a picture of the whole Earth yet?' this counter-cultural demand did not become a operational parameter of the mission, nor was it written into the technical sequence. The time available for capturing, processing and transmitting images - the latter determined by the lunar orbit itself and the loss of radio signal as the Lunar Orbiter went behind the moon - was budgeted to transmit a fixed number of images of the lunar surface.



A number of contingencies ensued that opened the barest possibility of capturing an Earth image. It was found that the chemical process of developing images was unexpectedly accelerated under operational conditions opening an interval of time sufficient to programme additional photographs. The proposal to take a photograph of the Earth came out of JPL whose engineers showed that there was sufficient transmission time and chemical capacity to take one or two extra photographs. There was in short the recognition of an opportunity arising within certain parameters of the technical process that needed to be aligned with the rest of the technical sequence to realise a radical but extremely risky modification of the mission. Retrospectively playing down the origins of this modification in the Californian ambience of the JPL, the justification issued by Langley Control for taking the two Earth photographs is couched in strictly scientific rhetoric “the purpose of the photograph was to obtain data, long of interest to scientists, on the appearance of the Earth’s terminator (line dividing sunlit and shadowed portions of the planet) as viewed from a distance of about 240,000 miles.” (NASA press release, cited Poole 75). But whatever the arguments in NASA for including a photograph of the Earth, the economic and political risks of altering the mission were considerable and would test the political, organisation and technical parameters of the mission.

The Lunar Orbiter was manufactured by Boeing who were not contractually obliged to change the flight programme to include photographs of the Earth. In order to take a photograph of Earth it was necessary to spin the entire Lunar Orbiter in order to move the camera from its focus on the Moon to the Earth behind it. The request from NASA to Boeing to perform this risky manoeuvre was initially turned down, but a contractual technicality permitting bonuses for useful ‘photographic data’ and NASA assuming full financial responsibility for any consequences following from the manoeuvre led Boeing, in spite of the risk, conditionally to approve it. In addition to economic constraints NASA’s programme manager Lee Scherer was also aware of political pressure on the mission and NASA; he reports fielding defensively a telephone call from the Chairman of the congressional committee on

space sciences Joseph Karth about the manoeuvre only to be told 'I don't give a damn why you did it, but me and 200 million other Americans thank you.' (cited in Poole, 75) In this welter of technical, economic and political contingency the photograph was eventually taken at 16.35 GMT on August 23rd and came via the links between NASA and the world's mass media to Heidegger's attention about three weeks later.

Heidegger of course remained unaware of these contingencies and the improvised and extremely fragile technical ensemble that eventually delivered the image to him. He was shocked less by the thinness of the technical threads and the tissue of contingencies that allowed this image to come into existence than by its deceptive confirmation of an invincible technical domination of the planet. He did not see the image for what it was - a product of technically mediated contingency - but ironically called on it to represent the invincible machinations of planetary technics.

Walter Benjamin has shown that shock depends on a lived experience, an *Erlebnis*, that cannot immediately be elaborated into consistent and narratable experience or *Erfahrung*. In the interview Heidegger describes an *Erlebnis* that is on the contrary almost immediately elaborated into an experience framed in terms of his already existing understanding of planetary technics. The shock indeed was minimal, if not dissembled, and was translated immediately into a confirmatory experience that did threaten his existing philosophy of technics. He seems to have been shocked less by something new and unanticipated that upset or challenged his thinking but by an image that confirmed what he had always already thought. Hence the almost automatic recursion to the terms and co-ordinates of the 1949 Bremen Addresses - atomic warfare, end of life on Earth and domination by the technical unthought in his immediate response to the automatic planetary image. But the speed of the immune shut down of the shock at the automatic planetary image also suggests that it perhaps posed more of a threat than Heidegger allowed.

Before turning to the way Heidegger situated the Lunar Orbiter image with respect to warfare, technics and the horrific we should reflect a little on the further contingency of the image arriving literally days before the *Spiegel* interview. Lutz Hachmeister's *Heideggers Testament: Der Philosoph, Der Spiegel und die SS* exposes the careful staging of Heidegger's interview on September 23rd 1966, of which the well-known embargo on its publication until after Heidegger's death was but the culminating gesture of a carefully choreographed operation. The interview was conducted by the editor of *Der Spiegel* Rudolf Augstein supported by his *Geisteswissenschaft* editor - Georg Wolff - who had been a member of the SS/SD during National Socialism and who along with other ex-SS members had played an ambiguous role in the early history of *Der Spiegel*. It is not recorded whether Heidegger was aware of his interlocutor's past although Wolff was ambivalently open about it, but regardless of this his discussion about his role in National Socialism with an ex-SS/SD member casts it in a different, perhaps even more interesting light. The view of the interview as a retrospective reckoning between the Volkisch SA and the SS factions of National Socialism over 'the inner truth and greatness' of their movement makes the contained interruption of this carefully planned encounter by the arrival of the Lunar Orbiter images all the more significant.

Heidegger's first response to the shock of the image was to immunise it by adapting it to his existing thinking. He cites it to facilitate a sensitive transition in the interview from an account of his actions as a short-lived National Socialist Rector of Freiburg University to his thoughts on planetary technicity. *Der Spiegel* and Heidegger had agreed in advance that the interview would have two focii: National Socialism and planetary technics and Heidegger skillfully manages the transition between them by evoking the experience of 'shock'. The way that he does so is revealing since he first asks Augstein and Wolff 'I don't know if you were shocked? *Ich weiss nicht ob sie erschrocken sind...*' (Heidegger 1976, 205) before specifying what they might have been by. In this way the question might momentarily be taken to refer to what Heidegger has just said about technics, politics and the 'inner

truth and greatness' of National Socialism before being switched to the recent planetary images.

The transition between the two parts of the interview begins with *Der Spiegel* asking whether Heidegger used the phrase 'inner truth and greatness' of the National Socialist movement that appears in the 1953 publication of *What is Metaphysics* in the 1935 delivery of the lecture. Heidegger insists that he did and that the 'planetary movement of modern technics' is 'a power (*eine Macht* ist) whose magnitude in determining our history can hardly be overestimated. For me it is a decisive question as to how any political system and which one - can be adapted (*zugeordnet werden kann*) to an epoch of technicity. I know of no answer to this question. I am not convinced that it is democracy.' (Heidegger 1976, 206) His reflection on planetary technics is initially framed in terms of power. Planetary technicity constitutes a power to which political systems must adapt and Heidegger is unsure whether democracy can provide a site for such an encounter; National Socialism's 'inner truth and greatness' however consisted precisely in the encounter between the power of planetary technics and that of the modern human. The latter however is insufficient with respect to planetary technical power: 'Technicity in its essence is something that man does not master by his own power' *Die Technik in ihrem Wesen ist etwas, was der Mensch von sich aus nicht bewältigt* (Heidegger 1976, 206 ). Heidegger's confrontation of the inequality between technical and human power shifts the terrain of the 'essence' of the human from power to 'thinking and poeticising'. Interestingly at this point he cites again the phrase 'inner truth' previously applied to National Socialism but now to the human establishing a distinction between the essence of technics as power and the human as 'thinking and poeticising'.

Having established a distinction between the essences of technics and the human Heidegger calls on the Lunar Orbiter images to stand for technical power as opposed to human thinking and poeticising. He modulates his thought again at this point to argue that technics has 'uprooted' humanity, but does so by a reference to atomic warfare that allies it with the Lunar Orbiter images as images of destructive

planetary technical power. Heidegger then mentions his recent, early September discussions with Rene Char - to which we will return - and the militarisation of the Provence landscape, citing him as saying 'that the uprooting of man that is now taking place is the end, unless thinking and poeticising again regain their non-violent power.' However the parallel movements between a shocking planet image to planetary technics and from atomic warfare to technics repeated here and stated earlier in the Bremen Address, points to a further unthought at play, this time warfare and specifically the Cold War. After some nostalgic referenes to 'home and rootedness in a tradition' *Der Spiegel* bring Heidegger back the theme of the 'world movement' of technics and ask 'whether it is bringing about an absolutely technical state or has done so already?' to which Heidegger emphatically assents - Ja!

Given the absolute technical state *Der Spiegel* proceeds to ask whether individuals or philosophy can influence 'this web of fateful circumstance' ; Heidegger responds that neither humanity nor philosophy can do so, and then offers the famous phrase 'only a God can save us' - that is to say a source of power able to confront technical power. Heidegger goes on to say that this must be thought otherwise since 'philosophy is at an end' having been transformed into cyberbetics. What was once philosophy is no longer capable of responding in thought to the condition of planetary technicity. Heidegger does however concede that 'the mystery of the planetary domination of the un-thought essence of technicity corresponds the tentative, unassuming character of thought that strives to ponder this unthought [essence].' With this *Der Spiegel* returns to the question of National Socialism's encounter with planetary technology posed in *What is Metaphysics* seeing it 'as the last, worst, strongest and, at the same time, weakest protest against this encounter between "planetary technicity" and modern man?' while linking this to 'a certain polarity' in Heidegger's personal between nostalgia for 'home' 'rootedness' and the thinking of planetary technicity'. Heidegger's responds with a signature reversal of positions: 'It seems to me that your take on technics is too absolute. I see the place of humanity in the world of planetary technics not as an inextricable and inescapable doom, but I see the task of thought precisely in this, that within its own limits it helps man as such achieve a satisfactory relationship to the essence of

technics' (Heidegger 1976, 214). Heidegger continues that while National Socialism went in the direction of thinking this satisfactory relation to technics this thinking was attempted by National Socialism 'Those people, however, were far too poorly equipped for thought to arrive at a really explicit relationship to what is happening today and has been underway for the past 300 years' (Heidegger 1976, 214). Beginnings were also made in this direction in the USA and Heidegger asks 'And who of us would be in a position to decide whether or not one day in Russia or China very old traditions of "thought" may awaken that will help make possible for human a free relationship to the technical world?' ( Heidegger 1976, 214).

Here Heidegger begins to look beyond what he thinks he can see, opening himself to the truly shocking thought that it is his understanding of technics that confirms the unthought of its essence. This is a position convincingly defended recently by Yuk Hui in his *Recursivity and Contingency* (2019) whose call for a multiple cosmotechnics in place of Heidegger's planetary technicity is confirmed by Heidegger's view of the automatic Earth image. Perhaps there is no 'pure' technical relation, perhaps technical power is an illusion and the contrast of technics and poetics is misplaced and that the site of the encounter of planetary technics and the modern human is indeterminate and contingent. This would make openness to contingency - the inner truth and greatness of democracy - indeed the most promising site for the encounter of planetary technics and the modern human.

In the interview Heidegger mentions that he has just returned from a seminar with Rene Char near his home in Provence. In the last of the 1966 seminars at Le Thor held on September 9th 'at the house of the poet by the lavender fields' (Heidegger 2003, 48) Heidegger and company discussed Heraclitus's fragment 30 on the cosmos and the everliving fire. The protocols of the discussion show Heidegger subtly modulating Heraclitus's understanding of cosmos from mere 'order' to 'the way things belong to each other in the midst of a "common presence" ("commune présence"), as day and night are joined to one another in the manner we saw.' (Heidegger 2003, 50) to radiance or 'the light of heaven' understood as that which shines not for itself but for that 'upon whom it shines' (Heidegger 2003, 51)

Heraclitus's cosmos, continues Heidegger, is fire as 'rising flame, brooding glow and the radiating light, along with the richness of contrasts which this equivocation makes possible... [it] never appears as something isolated, but shimmers ungraspably throughout everything' (Heidegger 2003, 52) Heidegger contrasts this understanding cosmos as radiant invisible living fire with the modern view of cosmology as the measurement and control of appearances through technics.

The automatic Earth images published almost to the day of the seminar were seen by Heidegger as shocking confirmation of the dominance of planetary technics. But the Lunar Orbiter images can also be seen as showings of the Heraclitean cosmos - not only do they show day and night as one on Earth - NASA's 'terminator line' - but the entire image depends on the radiance of the sun illuminating Earth and Moon while not itself becoming an object of representation. The equivocations of the image and the contingencies surrounding its making are closer to the shimmering light of the Heraclitean cosmos than to any pure technical relation. The automatic Earth image does not put its viewers 'in a position to make predictions about all and everything' (Heidegger 53/4) but rather to see the contingency of the cosmos and the technical and political improvisations and inventions with which it has to be encountered. Heidegger remained incapable of seeing this and so unable fully to experience the shock of accepting contingency as the site for the encounter of planetary technics and the modern human.

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